

BOSTON PUBLIC LIBRARY



3 9999 06544 625 2

seventh annual report

Preliminary edition
bound separately



1971

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

COMPREHENSIVE PROGRAM FOR MASS TRANSPORTATION

The Authority's Program for Mass Transportation, or Master Plan, as adopted in 1966 and subsequently revised, was revised twice in 1971.

In February 1971, the Advisory Board, the approving body, sanctioned a 100-bus increase to the original 400 buses authorized in the October 1969 revision of the Master Plan.

In May, the Advisory Board authorized a systematic replacement of all buses as they attained the end of their useful service life of 12 years.

The approval of these two revisions to the Master Plan enabled the Authority to file an application with the Urban Mass Transportation Administration, Department of Transportation, for financial assistance toward the purchase of transit buses and 10 compact-size buses to replace over-age and outmoded vehicles and to expand operations of the bus fleet.

The following charts show the various projects for which federal aid was applied for in 1971 or early 1972, plus projects and applications that are pending:

FEDERALLY-AIDED PROJECTS

Project Description and Type of Grant	Estimated Cost	Department of Transportation Participation	Local Share
Capital			
South Shore Extension Amendment	\$ 5,485,895	\$ 3,657,263 (2/3)	\$ 1,828,632 (1/3)
South Bay Maintenance Center	28,200,000	18,800,000 (2/3)	\$ 9,400,000 (1/3)
System Modernization	4,500,000	3,000,000 (2/3)	1,500,000 (1/3)
Bus Acquisition (310)	12,150,375	8,100,250 (2/3)	4,050,125 (1/3)
TOTALS	<u>50,336,270</u>	<u>33,557,513 (2/3)</u>	<u>16,778,757 (1/3)</u>
Technical Studies			
Boston Transportation Planning Review	2,540,250	1,693,500 (2/3)	846,750 (1/3)
Demonstration			
Validation Study Amendment	42,396	35,100 (83%)	7,296 (17%)
Light Rail Vehicle Specifications	129,925	109,084 (84%)	20,841 (16%)
TOTALS	<u>172,321</u>	<u>144,184</u>	<u>28,137</u>
Managerial Training	30,364	22,769 (3/4)	7,595 (1/4)
TOTALS FOR 1971	<u>\$ 53,079,205</u>	<u>\$ 35,417,966</u>	<u>\$ 17,661,239</u>
TOTALS FOR 1965-1971	<u>\$216,235,242</u>	<u>\$144,490,690</u>	<u>\$ 71,744,552</u>

Three additional capital grants — totaling \$26,302,273 — have been awarded since December 31, 1971. These were for:

Project	Estimated Cost	D.O.T. Participation	Local Share
Green Line System Improvements	\$38,120,000	\$25,413,333 (2/3)	\$12,706,667 (1/3)
Acquisition of non-revenue vehicles	853,410	568,940 (2/3)	284,470 (1/3)
South Bay Maintenance Center Amendment	480,000	320,000 (2/3)	160,000 (1/3)
TOTALS	<u>\$39,453,410</u>	<u>\$26,302,273 (2/3)</u>	<u>\$13,151,137 (1/3)</u>

Pending applications are for:

Project	Estimated Cost	D.O.T. Participation	Local Share
Station Modernization — Phase II	\$14,347,630	\$ 9,565,087 (2/3)	\$ 4,782,543 (1/3)
South Shore Extension (Braintree)	19,241,750	12,827,833 (2/3)	6,413,917 (1/3)
South Shore Supporting Facilities (North Braintree Station, Ivory Street, Electronic Fare Collection Equipment)	9,540,300	6,360,200 (2/3)	3,180,100 (1/3)
TOTALS	<u>\$43,129,680</u>	<u>\$28,753,120 (2/3)</u>	<u>\$14,376,560 (1/3)</u>

GOV Doc
HE 4491
B75M3

SEVENTH ANNUAL REPORT 1971

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

O:

is Excellency the Governor,
the General Court, and
the Advisory Board of the Massachusetts
Bay Transportation Authority

In accordance with the requirements of
Section 5 (h) of Chapter 161A of the
General Laws, as modified by Chapter
50 of the Acts of 1965, the Directors
of the Massachusetts Bay Transportation
Authority herewith render the seventh
report of the Authority which covers the
results of operations for the fiscal period
January 1, 1971, through December 31,
1971.

SUMMARY OF THE NET COST OF SERVICE FROM JANUARY 1, 1971, THROUGH DECEMBER 31, 1971

Total income for the period was \$59,486,528.08.
Total expenses for the period were
\$38,421,035.19. This total includes various fixed
charges and the sum of \$93,042,754.24 for wages
and fringe benefits.

The difference between total income and total
expenses is \$78,934,507.11 and represents the cost
of service in excess of income for the 1971 fiscal
year.

This figure, less state financial contract assistance
of \$17,545,665.73, fuel tax reimbursement of
\$351,176.05, reimbursement from outside
communities of \$256,909.00 and an unreimbursed
deficit relating to depreciation in the amount of
\$748,503.00, brings the net assessable cost of
service for the 79 communities of the Authority
strict to \$61,529,259.33.

In addition to the net cost of service, there are
three other items which must be considered by the
79 cities and towns in their 1972 account
settlement with the Commonwealth of
Massachusetts. These are illustrated by the
following table:

Net Cost of Service	\$61,529,259.33
Interest Charged by State Treasurer on Temporary Borrowings (Estimated)	\$ 1,620,000.00
Expenses of Boston Metropolitan District	16,000.00
TOTAL	\$63,165,259.33
Less Pupils' Reimbursement Chapter 17, Section 7B (Estimated)	\$ 1,000,000.00
NET COST TO COMMUNITIES	\$62,165,259.33

The Net Cost of Service to the Communities, while
reflecting the escalation of operating and
maintenance costs, represents, in actuality, the
public investment being made in a transportation
system that seeks to be flexible and responsive to
the needs of all the people. Furthermore, it is a
public investment in one segment of a balanced
transportation system so necessary to the
economic vitality of the capital City of Boston, the
other communities in the transportation district,
and the entire Commonwealth.

The following table illustrates the Authority's net
cost of service including all elements of cost for the
fiscal operation and the apportionment of these
costs by express and local service according to the
formulae contained in the legislation establishing
the Authority:

Statement of Net Cost of Service - Loss-By Express and Local

FISCAL PERIOD JANUARY 1, 1971 TO DECEMBER 31, 1971

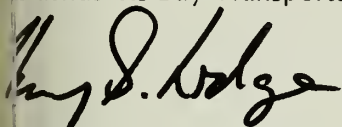
	Express Service	Local Service	Total
Income:			
Revenue from Transportation	\$26,349,361.82	\$26,845,027.48	\$53,194,389.30
Revenue from Other Rwy. Operations	893,076.01	246,341.07	1,139,417.08
Non-Operating Income	3,466,544.35	1,686,177.35	5,152,721.70
TOTAL INCOME	30,708,982.18	28,777,545.90	59,486,528.08
Operating Wages and Fringe Benefits:			
Wages	34,151,847.22	41,227,862.40	75,379,709.62
M.B.T.A. Pensions	3,966,704.79	4,985,113.32	8,951,818.11
Social Security Taxes	1,066,101.02	1,401,288.04	2,467,389.06
Workmen's Compensation	388,386.70	491,494.78	879,881.48
Accident and Sickness Insurance	212,659.00	268,062.23	480,721.23
Group Life Insurance	355,870.03	447,457.19	803,327.22
Blue Cross-Blue Shield	1,722,264.92	2,155,901.36	3,878,166.28
Unemployment Insurance	4,774.73	5,384.27	10,159.00
Uniform and Work Clothes	78,334.05	113,248.19	191,582.24
TOTAL OPERATING WAGES AND FRINGE BENEFITS	41,946,942.46	51,095,811.78	93,042,754.24
Material and Other Items	4,220,256.22	5,369,055.80	9,589,312.02
Injuries and Damages	375,498.09	1,743,482.55	2,118,980.64
Depreciation	(1,260,111.00)	511,608.00	(748,503.00)
Interest on Unfunded Debt	499,140.71	1,354,810.49	1,853,951.20
Fuel	2,835,458.17	1,520,675.89	4,356,134.06
Taxes (Other than included above)	62,001.02	556,437.18	618,438.20
Railroad Commuter Subsidy	5,760,755.53	—	5,760,755.53
Middlesex & Boston Subsidy	—	1,161,118.50	1,161,118.50
Rapid Transit Inc. Subsidy	—	151,895.21	151,895.21
TOTAL OPERATING EXPENSES AND TAXES	54,439,941.20	63,464,895.40	117,904,836.60
Fixed Charges:			
Interest on Funded Debt (M.T.A.)	2,857,736.86	1,056,971.17	3,914,708.03
Interest on Funded Debt (M.B.T.A.)	7,318,873.08	471,757.07	7,790,630.15
Payment on Funded Debt (M.T.A.)	2,132,517.79	1,608,741.49	3,741,259.28
Payment on Funded Debt (M.B.T.A.)	4,315,000.00	713,143.50	5,028,143.50
Cambridge Subway Rental	7,941.66	—	7,941.66
Miscellaneous Debits	7,161.91	2,648.93	9,810.84
Bank Service Charges (M.B.T.A.)	21,808.71	1,896.42	23,705.13
TOTAL FIXED CHARGES	16,661,040.01	3,855,158.58	20,516,198.59
TOTAL CURRENT EXPENSES	71,100,981.21	67,320,053.98	138,421,035.19
COST OF SERVICE IN EXCESS OF INCOME	40,391,999.03	38,542,508.08	78,934,507.11
Less:			
State Fin. Contract Assist.-M.T.A.	3,000,000.00	—	3,000,000.00
State Fin. Contract Assist.-M.B.T.A.	8,855,031.00	506,316.67	9,361,347.67
Gas & Diesel Taxes Reimbursable	—	351,176.05	351,176.05
State Financial Contract Assistance on Railroad Subsidy	5,184,318.06	—	5,184,318.06
Reimbursement from Outside Communities	—	256,909.00	256,909.00
TOTAL CONTRACT ASSISTANCE AND ADJUSTMENTS	17,039,349.06	1,114,401.72	18,153,750.78
NET COST OF SERVICE - LOSS	23,352,649.97	37,428,106.36	60,780,756.33
LESS - UNREIMBURSED DEFICIT	(1,260,111.00)	511,608.00	(748,503.00)
NET ASSESSABLE COST OF SERVICE	\$24,612,760.97	\$36,916,498.36	\$61,529,259.33

Financial Statements

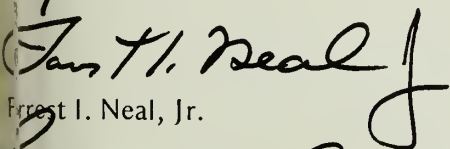
the balance sheet and statement of long-term debt of the Massachusetts Bay Transportation Authority as of December 31, 1971, and the related statements of revenue and cost of service, reimbursed cost of service, and source and disposition of funds for the fiscal year ended December 31, 1971, together with notes relating to these financial statements are appended to this report.

Respectfully submitted,

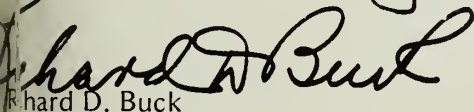
Board of Directors
Massachusetts Bay Transportation Authority



Henry S. Lodge, Chairman



Ernest I. Neal, Jr.



Richard D. Buck



Francis B. Gummere



John J. McCarthy

March 31, 1972

ARTHUR ANDERSON & CO.

Boston, Massachusetts

To the Board of Directors of
Massachusetts Bay Transportation Authority:

We have examined the balance sheet and statement of long-term debt of MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (a political subdivision of the Commonwealth of Massachusetts) as of December 31, 1971, and the related statements of revenue and cost of service, unreimbursed cost of service, and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

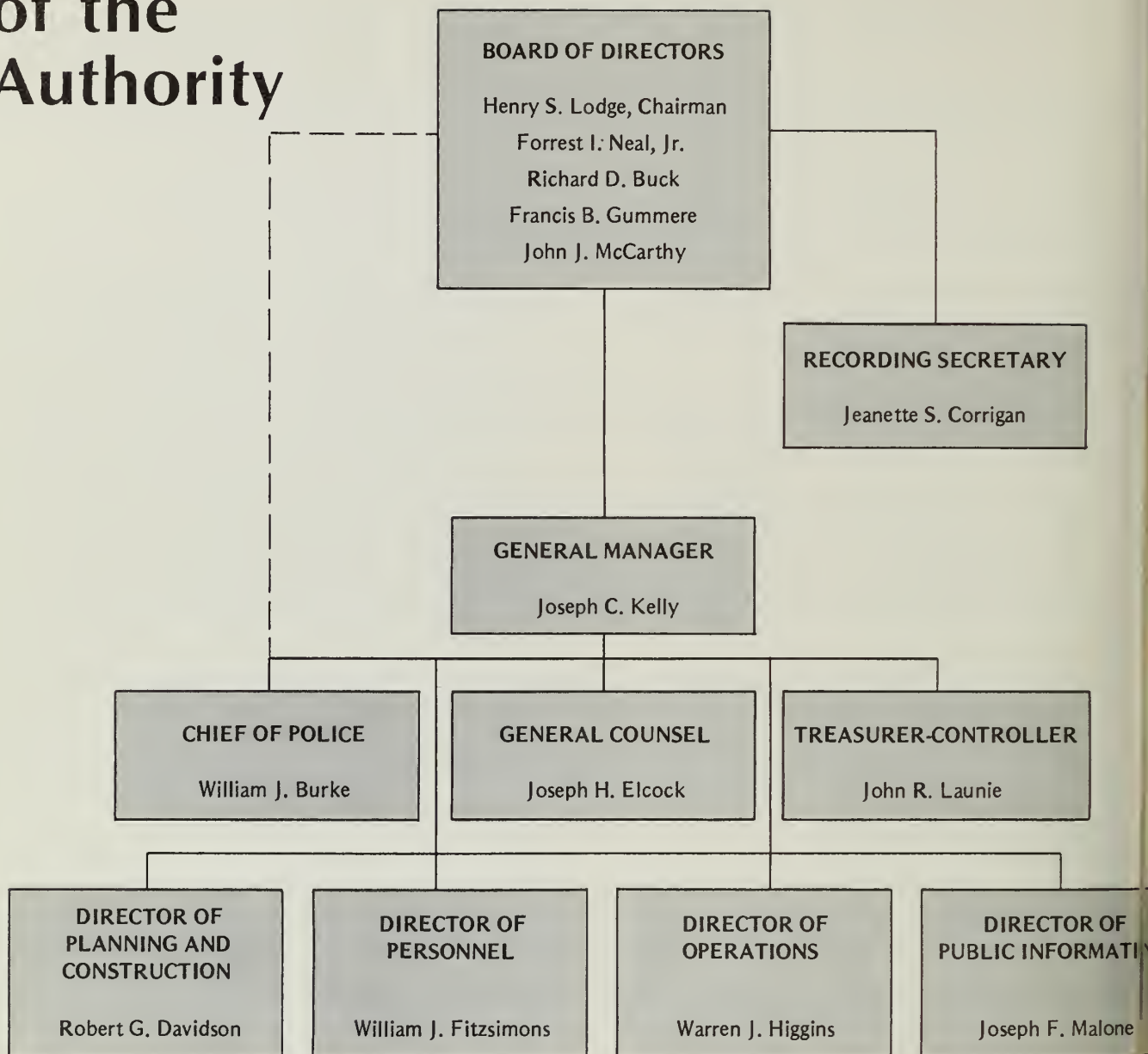
In our opinion, the accompanying financial statements present fairly the financial position of the Massachusetts Bay Transportation Authority as of December 31, 1971, and the results of its operations and changes in financial position for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding period.



Boston, Massachusetts

March 17, 1972.

Organization of the Authority



Executive Office of Transportation and Construction

On June 25, 1971, Alan A. Altshuler was appointed by Governor Francis W. Sargent to serve as Secretary of the Commonwealth's new Executive Office of Transportation and Construction.

A major task being undertaken by the Executive Office of Transportation and Construction is the federally-aided Boston Transportation Planning Review, a restudy of highway, transit and commuter railroad planning within the Route 128 perimeter. The Authority is making substantial contributions, especially in personnel services, to the restudy, recommendations from which are scheduled to be made by the Secretary to the Governor in the Summer of 1972.

GENERAL MANAGER



JOSEPH C. KELLY

BOARD OF DIRECTORS



HENRY S. LODGE
CHAIRMAN-BOARD OF DIRECTORS

Appointed August 27, 1970
Term Expires March 30, 1975



FORREST I. NEAL, JR.
DIRECTOR

Reappointed April 16, 1972
Term Expires March 30, 1976



RICHARD D. BUCK
DIRECTOR

Appointed April 2, 1968
Term Expires March 30, 1973



FRANCIS B. GUMMERE
DIRECTOR

Appointed September 16, 1969
Term Expires March 30, 1974



JOHN J. McCARTHY
DIRECTOR

Reappointed April 26, 1972
Term Expires March 30, 1977

Innovations and Renovations 1971 . . .

The year 1971 was a year of innovation and renovation.

The two major innovations were the opening of the South Shore rapid transit extension and the implementation of the Exact Fare System on streetcars, buses and trackless trolleys — both highly successful ventures.

Many other accomplishments, plus the wide range of renovations to plant and equipment, brought about significant improvements over 1970 in the Authority's services and operations.

South Shore Rapid Transit Extension:

The opening of the 6.25-mile South Shore Rapid Transit Extension from Boston to Quincy on Wednesday, September 1, 1971, marked the completion of the initial phase of the planned construction of a high speed rail line to South Shore communities served more than a decade ago by the Old Colony Railroad. The next phase is to continue the line to Braintree and to Weymouth or Holbrook to fill the transportation needs of one of the fastest growing regions in the Commonwealth.



Transportation Secretary John A. Volpe snips ribbon at Wollaston Station on the new South Shore Extension of the Red Line. Other dignitaries looking on include: Attorney General John Mitchell, Governor Francis W. Sargent, MBTA Board Chairman Henry S. Lodge, Quincy Mayor James R. McIntyre, and State Representatives Walter J. Hannon and Joseph E. Brett.

From the first day of revenue service on September 2 through December 31, the South Shore Extension has carried 1,974,872 revenue passengers. The five-day-a-week commuters are averaging better than 22,000 a day, well above the number projected after a year's operation.

The immediate success of the new extension proves that if fast, comfortable service at a reasonable fare is offered, the public will use it.

From early observations of passengers arriving at the three stations, the Authority ascertained that a great many either walked or came by automobile. As a result, the Authority was able to reduce expensive bus mileage for significant cost savings.

In constructing the South Shore Extension, the Authority applied the most modern and highly sophisticated technological developments in electrified rail transit and also adapted these developments to the existing Red Line operating between the Dorchester section of Boston (Ashmont Station) and Cambridge (Harvard Station).



Special features of the extension are:

Signals: An ultramodern electronic signaling and train control system that includes programmed train scheduling, supervisory control consoles and status displays, and a high-speed data transmission system.

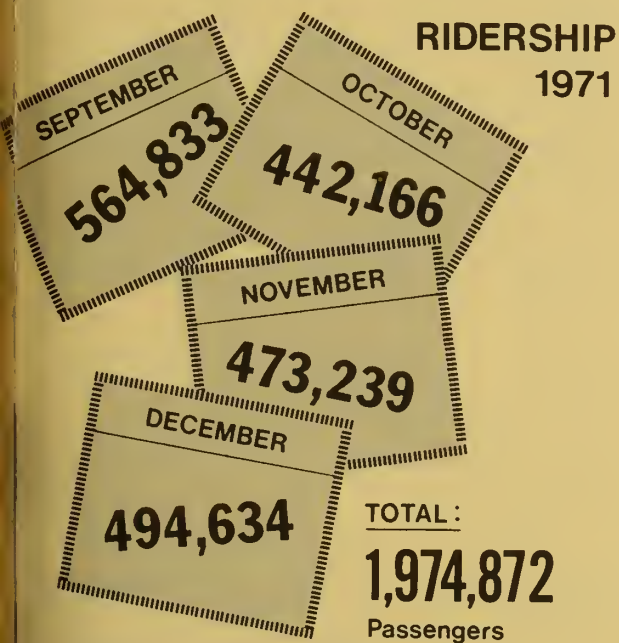
Communications: Two-way radio for communication between trains and the control center at the new Operations Center at 45 High Street, Boston.

Track: Welded rail on concrete ties for riding comfort.

Equipment: Brushed aluminum air-conditioned cars with a speed capability of 70 miles per hour.

The cost to construct the extension, including roadway and structures, stations, signals and communications, power and track, was \$35.9 million. Other costs were \$39.5 million, making the total South Shore Project cost \$75.4 million.

Participating in the opening day festivities were members of President Nixon's Cabinet, Attorney General John Mitchell and Secretary of Transportation John A. Volpe, and other national, state and local dignitaries. Thousands of South Shore residents were attracted to the historic event and took advantage of the Authority's offer of free rides from the Quincy Center, Wollaston and North Quincy Stations to the Dorchester integration point with the existing Red Line, and return.



Ribbon-cutting ceremonies and special activities were held at the North Quincy and Wollaston Stations as the inaugural trains proceeded south to Quincy Center Station for the formal opening day program.

Principal speaker for the official opening was Transportation Secretary Volpe, who, as Governor in 1962, sought to solve the South Shore's transportation problems. Other speakers included Governor Francis W. Sargent, Quincy Mayor James R. McIntyre and Henry S. Lodge, Chairman of the Authority's Board of Directors. General Manager Joseph C. Kelly was master of ceremonies.

A novel feature of the opening day festivities was the involvement of Quincy civic and business organizations in promoting, at no cost to the Authority, the arrival of the new rail rapid transit service. These organizations working with the South Shore Transit Celebration Committee named by Mayor McIntyre to welcome the MBTA to Quincy sponsored various special activities throughout the city from mid-morning to late into the evening.

Coincidentally, the opening of the South Shore Extension occurred exactly 74 years after the nation's first subway opened in Boston for streetcar service on Wednesday, September 1, 1897.

The successful opening of the South Shore Extension was attributable in great part to the "readiness" plans and programs instituted in the early months of 1971. Training and instruction programs were undertaken for the operators and guards assigned to operate the new trains; similar programs were held for towermen and dispatchers who were to be involved in operating the extension from the new Operations Control Center at Dewey Square; a massive safety education program to acquaint South Shore residents, particularly the children, with the inherent dangers of "live" third rail operations, was undertaken before community groups and in Quincy schools as well as in Boston schools in the Neponset area; and the new trains, as well as the signals, communications and power distribution systems, and track and roadbed underwent extensive testing to keep operational problems at a minimum.



Exact Fare System:

A most successful transition from the old change-making return-type fare box system to the Exact Fare, locked fare box system was made on all surface streetcar, bus and trackless trolley operations on Monday, October 11, 1971.

Public acceptance of the new system was virtually immediate. In the first few days, the daily average

of scrip issued when passengers failed to have their exact fare was about 300. By year's end, the daily average had dropped to about 20. At the outset, only a minimal amount of problems and

criticism arose and all were immediately and effectively corrected.

A success from an operational point of view, the Exact Fare System is also a success as a crime deterrent. Adopted by the Authority to eliminate assaults and robberies perpetrated on passengers and employees, the Exact Fare System has eliminated these crimes.

More than a year of planning and preparations, involving a large number of Authority personnel from many different departments, led up to the gigantic task of converting almost 1,500 vehicles from the old to the new fare boxes in a three-day period (October 8, 9, and 10) without any disruption in service.

After much research and evaluation of the Exact Fare System on other transit properties, a plan for implementing the system on the Authority's surface lines was developed and approved in the Fall of 1970.

The first phase of the plan got under way when 1,700 new registering, locked fare boxes were ordered for delivery beginning in the Spring of 1971 and ending in August. Acquired from the New York City Transit Authority were 1,500 secondhand fare box bases. Testing of the fare boxes began in June.

Eighteen fare box cash vault storage rooms were built at various bus garages and streetcar facilities; five new revenue collection trucks were purchased, and new type coin sorting and counting machines were bought.

NOTICE
EFFECTIVE OCT. 11 1971
AN EXACT FARE SYSTEM
WILL BE INAUGURATED
ON ALL MBTA SURFACE LINES
PASSENGERS BOARDING BUSES,
STREET CARS AND TRACKLESS TROLLEYS
WILL BE REQUIRED TO HAVE EXACT FARE
OPERATORS WILL CARRY NO MONEY AND
CANNOT MAKE CHANGE.
CHANGE MAY BE OBTAINED
AT ALL COLLECTORS BOOTHS

The planned change-over to the Exact Fare System resulted in the elimination of the station receiver job classification and creation of the new classification of vault agent. There were 42 positions in the station receiver classification. Of these, 42 were reclassified to vault agent and 10 were reclassified to revenue collection agent, three of whom are assigned to the audit team.

To minimize inconvenience to passengers after the Exact Fare System became effective, scrip in a two-part form was developed for use when a passenger offers the operator a coin larger than the fare required, or a bill. The operator then punches in the scrip the amount of the coin or bill rendered and the fare due, depositing one-half of the scrip in the fare box with the coin or bill and giving the other half to the passenger who may redeem it at the 500 Arborway headquarters building.

Other preparations for the change-over included the development of an advertising and promotion program, to which the news media gave the Authority their enthusiastic support, and the development of instructions, guidelines and new procedures necessary to operating the Exact Fare System.

The capital investment in the Exact Fare System amounted to \$1,498,000. The expenditures were as follows:

1,700 New Fare Boxes	\$1,168,000
Revenue Collection Trucks, Coin Collection and Counting Equipment	160,000
Cash Vault Storage Rooms	170,000

Bus Service Innovations

Two express bus routes that are operated via the Massachusetts Turnpike were added during the year. One, operating between Riverside and Copy Square, began on March 29 and the other, operating between Central Square, Waltham, and Downtown Boston (Chauncy and Summer Street), began on August 2.

For the convenience of senior citizens in the Franklin Field Housing Project, a route was established between the project and Egleston Square and Mattapan on September 7.



Summer route to provide South Boston residents with improved access to the recreational facilities at Castle Island began operating from Gavin Way on June 28.

Also on June 28, a specially-painted "Freedom Trail" bus began operating over a route from Tremont and West Streets to the Boston Naval Shipyard in Charlestown, passing close to Boston's historical sites. With the end of the tourist season in October, this service was discontinued, but the Authority plans to reinstitute it for the 1972 tourist season.

A new route from Reading Square to Sullivan Square Station via I-93 was established to replace the route operating between Reading and Sullivan Square Station through Stoneham. The latter route was discontinued after Stoneham voted to discontinue local service.

The opening of the South Shore rapid transit extension required the development of a new network of feeder bus routes to serve the North Quincy, Wollaston and Quincy Center Stations. After the extension was opened, several adjustments were made in the bus service because a great many passengers were either walking to the stations or arriving by automobile.

Miscellaneous

Other innovations included:

- Adoption of a new color scheme for all revenue vehicles, giving them 30-inch wide bands of strong, bright line colors which reinforce the Authority's over-all color scheme for graphics and design at new and modernized stations, thus helping passengers to identify with the service they are using. Rapid transit cars and streetcars use line identifying colors while the buses, because they connect with the rail lines, use a bright golden yellow.

- The addition of two K-9 Corps dogs to the Police Department, which during the year, reached its full authorized complement of 13 men for the first time.



- The construction of a six-bus garage at Charlestown; a new shelter over the inspection pit at Riverside; a new diesel injector repair room at Everett; and a new inspection pit at Mattapan to make this streetcar operation self-sustaining.



New six-bus garage at the Charlestown Yard.

- Use of low sulphur fuel to comply with air pollution regulations of the Massachusetts Department of Public Health.
- The rental, for testing purposes, of a hi-rail truck that is used for snow work and shifting car work trains and rapid transit cars.
- The purchase of a track liner and related track maintenance equipment to perform work previously done manually by large work crews.
- A stepped-up accident prevention program that resulted in a reduction of accidents from 1970.
- Implementation of a railroad contingency plan that substituted buses during a strike against the Boston & Maine and Penn Central Railroads on May 18 and May 19.
- Installation of engine block heaters in buses at Fellsway Garage and at the Arlington Heights parking facility to eliminate the need to run engines in buses parked outside in cold weather, thus reducing noise and air pollution.
- The opening of a school in basic electricity for carhouse repairmen.
- Implementation of an organizational change in the Operations Directorate whereby the Equipment Engineering and Maintenance Department was abolished and three separate departments — Equipment Engineering, Shop Maintenance, and Equipment Maintenance — were established in order to achieve major improvements in the maintenance and repair of revenue equipment, thus assuring sufficient equipment availability to meet service requirements.

- Fabrication of a mockup of the cab portion of the proposed #12 Orange Line car.
- Development of preliminary engineering for the proposed #4 East Boston cars.
- Fabrication of a clearance test car to simulate the configuration of the proposed articulated surface car for the Green Line.
- The addition of an ambulette, equipped with an inhalator and emergency first aid supplies, to give quick service to sick or injured passengers and employees.
- Establishment, for the first time, of a common expiration date for all labor contracts (December 31), except for the contract with the Building and Construction Trades Employees Council of Metropolitan Boston, which expires March 31, 1972.
- Continued conducting the Validation Test Study as the recipient of a grant from the Urban Mass Transportation Administration. Also involved are the transit properties at Chicago, Cleveland, Atlanta and Oakland. The Authority retained the services of the Industrial Relations Center, University of Chicago, to make the study which is designed to establish standards for testing applicants for bus operator jobs.
- Participation in the Boston Transportation Planning Review ordered by Governor Sargent.

Renovations 1971

Many renovation projects, started or completed in 1971, are bringing about improvements in (1) the availability of equipment, (2) meeting schedules, (3) the appearance of stations and equipment, (4) the work areas for Authority personnel, etc.

For example:

- About 50 streetcars were repainted.



New look is given to one of 50 streetcars being completely refurbished under a federally-aided program.

- The federally-aided program to refurbish another 50 streetcars was started with the first three returned to service by the end of the year.
- Renovation of the older Blue Line rapid transit cars began with the first pair scheduled to be returned to service in early January 1972 and a second pair in early February.
- 21,200 feet of track and roadbed in various locations of the Green Line streetcar system were renewed.
- An additional 3,200 feet of streetcar track and 1,000 feet of rapid transit track east of Columbia Station were renewed.



New fare collection area for both the Orange Line and Green Line at the modernized Haymarket (Green Line) Station.

- Station modernization projects were completed at the Prudential, Haymarket Green and State Stations.
- Minor station work on 26 stations began late in 1971.
- Eight underground stations were painted.



- 75 percent of the Everett Repair Shop were painted.
- A clean-up, fix-up, paint-up program for all shops and machine tools was initiated to improve work areas.



VANDALISM ON THE

YOU MAY BECOME THE INNOCENT VICTIM OF A
THOUGHTLESS ACT OF VANDALISM. AN INCREASE
OF DELIBERATE ACTS OF VANDALISM ON THE M.B.T.A.
HAS ALREADY CAUSED SERIOUS PERSONAL INJURY
TO MANY PASSENGERS....SOME OF THEM YOUR
NEIGHBORS.

A YOUNGSTER'S SEEMINGLY HARMLESS PRACTICAL
JOKE ON M.B.T.A. PROPERTY CAN TURN A COMMUTER'S
HOMEWARD-BOUND TRIP INTO DISASTER!

EVERYONE MUST BE MADE AWARE THAT A SENSELESS
ACT OF VANDALISM CAN AND DOES ENDANGER
HUMAN LIFE.

IT MUST BE STOPPED! WE NEED YOUR HELP!

A CLEAN, EFFICIENT, SAFE PUBLIC TRANSPORTATION
FACILITY IS ESSENTIAL TO YOU AND YOUR FAMILY.

VANDALISM HURTS EVERYONE

WITH ACTS OF VANDALISM SHOWING A DRAMATIC INCREASE IN FREQUENCY AND SEVERITY IN 1971 – 187 INCIDENTS VERSUS 76 IN 1970 – THE AUTHORITY IN EARLY 1972 WILL LAUNCH AN ALL-OUT EFFORT TO REDUCE, AND HOPEFULLY HALT, SUCH DANGEROUS ACTIVITIES ON THE PART OF A FEW WHO THREATEN THE SAFETY OF SO MANY. ABOVE IS A REDUCED SIZE COPY OF THE 10,000 FLYERS THE AUTHORITY PRODUCED FOR USE IN THE ANTI-VANDALISM DRIVE.

Capital Program Developments . . .

On November 12, 1971, the General Court enacted legislation granting the Authority additional bonding power in the amount of \$124 million, thus providing the one-third local funds necessary before two-thirds federal transit aid grants can be awarded by the Department of Transportation's Urban Mass Transportation Administration (UMTA).

More than one half of the new local and federal funds are to be spent on badly needed improvements to the Authority's existing plant and facilities and replacing obsolete revenue equipment.

The following projects were designated by the General Court to be undertaken with the new local money provided federal assistance is forthcoming:

CENTRAL AREA SUBWAY SYSTEM

\$30 Million

Modernization of the Green Line streetcar system, including the purchase of new cars and making improvements to track and roadbed, the power distribution system, signals and communications, and the shop and car storage facilities.

STATION MODERNIZATION

\$5 Million

State on the Orange and Blue Lines
Haymarket and Essex on the Orange Line
Ashmont, Washington and Park on the Red Line
Park and Auditorium on the Green Line

PINES RIVER EXTENSION OF THE BLUE LINE

\$13 Million

NEW BUS GARAGES AND OTHER PLANT IMPROVEMENTS

\$25 Million

Two bus garages
Miscellaneous system rehabilitation, including improvements to the power generation and distribution facilities.

ROLLING STOCK REPLACEMENT

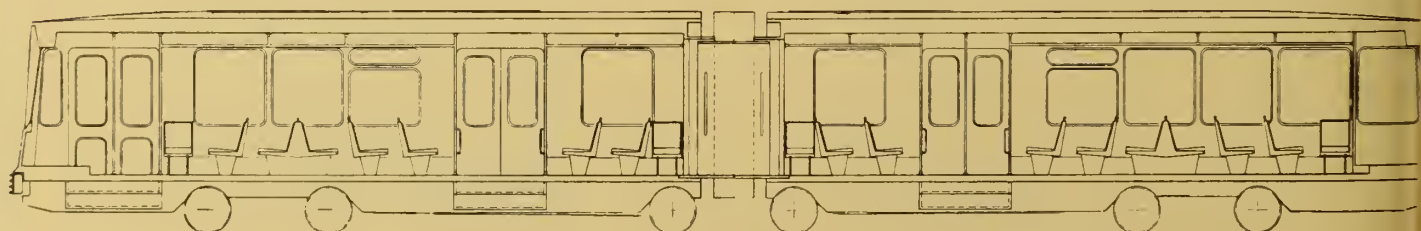
\$11 Million

New cars for the Blue Line
New buses
Modernization of Orange Line (Forest Hills-Everett), Red Line (Cambridge-Dorchester) and Blue Line (East Boston) cars.

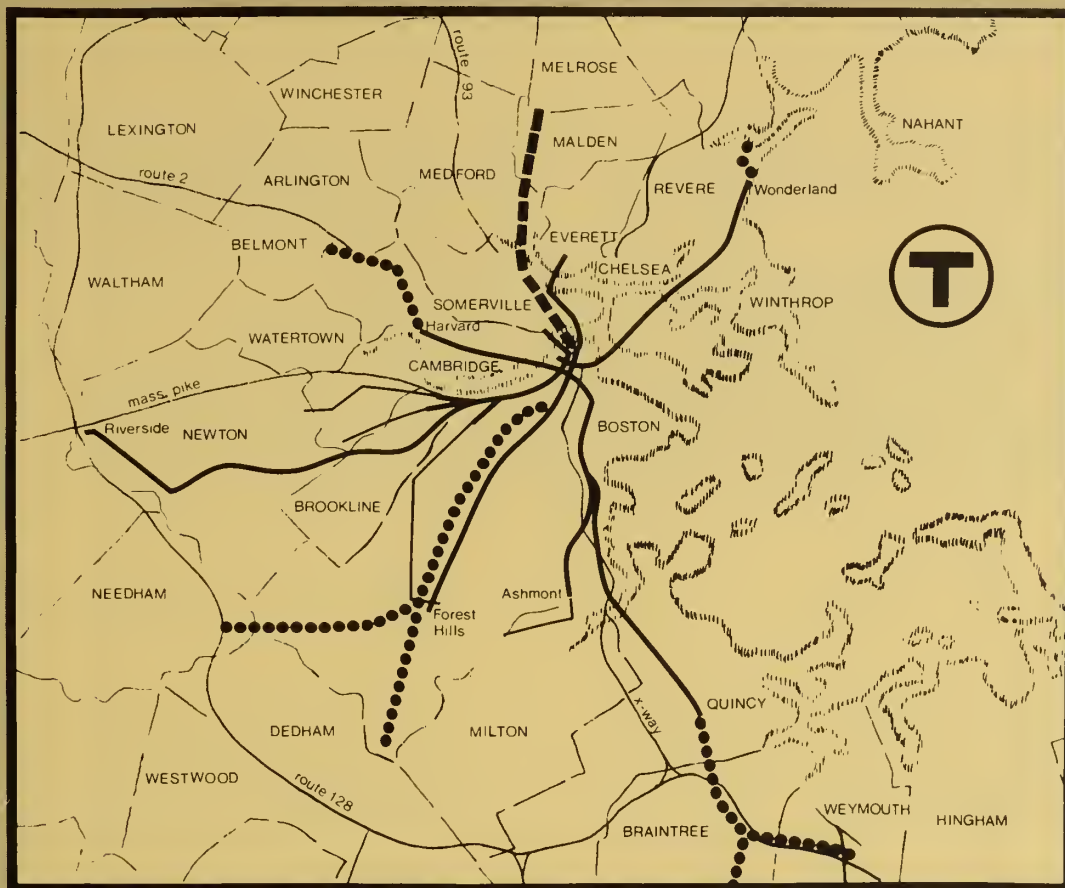
PRIVATE BUS CARRIER IMPROVEMENTS:

\$2 Million

Financial assistance for replacing rolling stock and modernizing garages.



Proposed light-weight rail vehicle for Green Line.



RAPID TRANSIT PROJECTS

UNDER CONSTRUCTION — — — — —
 PROPOSED EXTENSIONS — ·····
 EXISTING SYSTEM —————

HARVARD-ALEWIFE CORRIDOR CONSTRUCTION PLANS AND SPECIFICATIONS

\$2 Million

FOREST HILLS — WEST ROXBURY — NEEDHAM EXTENSION

\$20 Million

Extension of the Orange Line from a connection at Forest Hills to Roslindale, West Roxbury and Needham, utilizing the Needham Branch right-of-way of the Penn Central Railroad.

SOUTH SHORE EXTENSION — PHASE II

\$8 Million

Braintree and Weymouth or Holbrook

PRIORITY RIGHT-OF-WAY ACQUISITION

\$8 Million

Acquisition of rights-of-way and land to permit extension projects to proceed.

In diligent pursuit of available federal funds, the Authority on December 8, 1971, filed with UMTA an application for a \$25,413,333 transit aid grant for the program to improve the Green Line System. On December 20, 1971, an application for a \$9,565,087 grant was filed to assist on Phase II of the Station Modernization Program.

Status Report on Other Projects in Capital Program

SOUTH SHORE EXTENSION

Construction of the South Shore Extension southerly from Quincy Center to Braintree was delayed when a controversy developed with the town over the Authority's plans to build a South Quincy-North Braintree Station as well as a station at South Braintree. The controversy is expected to be resolved in 1972 so that construction can begin without additional loss of time.

HAYMARKET-NORTH EXTENSION

Considerable progress is being made in the construction of the Haymarket-North Project, a six-mile rapid transit extension on a new alignment from the existing Orange Line tunnel at Haymarket Square to the Malden-Melrose line.

In November 1971, the project's first contract, the \$23,775,374 tunnel from Haymarket Square, under the Charles River, to Charlestown, and a new underground North Station, was completed.

By the end of the year, the \$9,188,495 bridge over the Mystic River between Somerville and Medford was 99 percent completed and the \$11,239,326 contract for the construction of Community College Station, a viaduct over the Boston & Maine tracks, the new Sullivan Square Station and modifications to a highway bridge was 57 percent completed.



Mystic River Bridge construction in April 1971 for the Haymarket-North Rapid Transit Extension of the Orange Line.

During the year, three major contracts were awarded. Work started on the \$1,687,100 contract for trackwork from Haymarket Square to Sullivan Square and on the \$4,955,723 contract for grading, drainage, installation of subsurface utilities, and construction of an underpass in Medford. Work on the \$2,639,515 contract for substation power will get under way in early 1972.

The remaining contracts for the project will be advertised in 1972. These include the contracts for the Wellington Yards and Shops Complex in Medford; the Malden Center and Oak Grove Stations and bridges in Malden; main line track from Sullivan Square to Oak Grove and track power, including third rail; the Wellington Yard track, and signals and communications from Haymarket Square to Oak Grove.

SOUTH BAY MAINTENANCE CENTER

Preliminary designs were completed during the year for the South Bay Maintenance Center. The center will include a maintenance and repair facility for Red Line rapid transit trains, replacing the existing Eliot Carhouse in Cambridge, and a new 200-car garage, replacing the existing Albany Street Garage. A final design contract for the rapid transit facility and ancillary buildings was awarded in 1971. Construction is scheduled to start in the Spring. Early in 1972, the final design contract for the underground garage is expected to be awarded with construction starting later in the year.

The first contract for this project was for the demolition of existing railroad buildings and structures on the former Dover Street Yards of the Penn Central Railroad. During demolition, a large amount of surface concrete, buried throughout the site, was located through the use of a pulsed radar system. This contract was completed in November 1971.

STATION MODERNIZATION

Under Phase I of the Station Modernization Program, major modernization was completed at Prudential, Haymarket Green and State Stations during the year and minor station work began on 26 other stations late in 1971.

Major modernization at Prudential Station included installation of an escalator from the platform to the sidewalk, a new stairway from the sidewalk to the mezzanine, new kiosks, lighting and graphics; at Haymarket Green, complete new platforms and entrance facilities, including an escalator from the platform to the street level; and



Artist's rendering of the planned South Bay Maintenance Center in South Boston.

State Station, a new entrance to the northbound Orange Line platform that was extended and installation of an escalator, fare collection facilities and stairways.

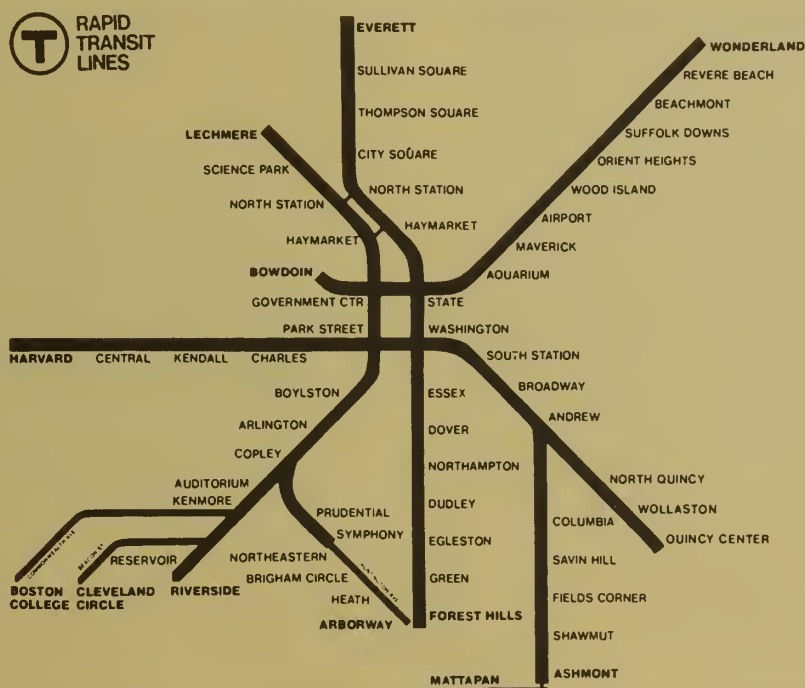
SYSTEMWIDE MODERNIZATION

A Systemwide Modernization Project of public and system improvements began in 1971. This project includes the refurbishing of 50 streetcars, giving the exteriors the new color-coded paint to match the Green Line graphics; modernization of stations, installation of bus washer facilities, and other items to improve passenger comfort and convenience while improving service.

SOUTHWEST CORRIDOR PROJECT

The first 1,500 feet of the South Cove rapid transit tunnel from a junction with the present Orange Line tunnel at Washington and Kneeland Streets, Boston, to near the Massachusetts Turnpike, and a new rapid transit station within the tunnel were substantially completed in 1971, culminating three years of unique and very difficult construction.

Construction of the tunnel and station at a cost of \$11,238,639 was undertaken as Phase I of the Southwest Corridor Rapid Transit Extension to be built in the median strip of Interstate Highway 95



Status Report (continued) . . .

planned for the right-of-way of the Penn Central Railroad's main line from South Cove to Forest Hills.

Although the tunnel and station are completed, the Authority cannot proceed with planning and engineering for Phase II of the Southwest Corridor Rapid Transit Extension because of the moratorium placed on highway construction within the Route 128 perimeter and a Boston transportation restudy, both ordered by Governor Francis W. Sargent. The restudy is being made by the Boston Transportation Planning Review whose recommendations pertaining to the Southwest Corridor are scheduled to be made next Summer.



Construction of the South Cove Tunnel in March 1971.

NEW BUSES

On order and scheduled to be delivered in 1981 Spring are 300 diesel transit buses. Planned to be ordered are 10 small (25 passengers) buses. All new buses will be equipped with anti-pollution devices to comply with federal regulations. They will also have the 30-inch wide golden yellow band adopted as the identifying color for the bus fleet.

COMMUTER RAILROADS

In an effort to bring an end to the annual mid-summer crisis that faces the General Court and the Advisory Board on the commuter railroad subsidies, the Authority initiated a study of the services provided by both the Boston & Maine and Penn Central Railroads. The study, whose recommendations, will be finalized in early 1982.



Subsidized Private Carrier Operations

Railroads	Number of Passengers	Train Miles	Car Miles	Coach Miles	Budd Car Miles	Locomotive Miles
Boston & Maine	5,800,000	1,461,891	2,802,269			
Penn Central	2,000,000+			511,692	335,614	125,178

Bus Companies	Number of Passengers	Common Carrier Miles	Charter Miles
Middlesex & Boston Street Railway Co.	2,900,000	1,709,402	283,985
Rapid Transit, Inc.	1,300,000	300,331	14,041

Ⓣ STATISTICS – 1971

Population of 79 Communities in Ⓣ district (Latest Commonwealth Census)	2,763,410
Number of Motor Vehicles Registered in Ⓣ District	1,373,195
Number of Bus Routes	179
Number of Streetcar Routes	5
Number of Rapid Transit Routes	3
Number of Trackless Trolley Routes	4
Buses	1,219
Streetcars	335
Rapid Transit Cars	356
Trackless Trolleys.	55
Rapid Transit Stations	51
Single Track Rapid Transit Mileage	77.3
Single Track Streetcar Mileage	86.7
Weekly Vehicle Miles Operated	861,424
Weekly Vehicle Trips Operated	78,029
Proposed Rapid Transit Extensions (miles)	50.3
Employees (Nov. 1, 1971)	6,558
Bargaining Units	27
Daily Passengers (approx.)	575,000
Annual Passengers (approx.)	149,000,000
Boston Elevated Railway Company (chartered)	1894
Public Control Act (by Legislation)	1918
Metropolitan Transit Authority (by Legislation)	1947
Massachusetts Bay Transportation Authority Ⓣ (by Legislation)	1964

New and Proposed Legislation

In the 1971 session of the General Court, the Authority sought and obtained two important pieces of legislation affecting transportation funding.

One concerned the additional \$124 million bonding authorization that has been detailed earlier in this report and the other continued the 90 percent state financial assistance on the cost of the commuter railroad subsidies for the Boston & Maine and Penn Central Railroads through July 31, 1972.

Other new statutes affecting the Authority require in-service and supervisory training for its policemen and establishment of a police retirement system; authorize the sale of an unused substation and land in Arlington to that town; order the construction of an entrance to Fields Corner Station from

Charles Street; designate the plaza in front of the Quincy Center Station as the Captain William McIntyre Plaza; and authorize the setting of fares for children and pupils riding Suburban Division buses at no more than one-half of the adult cash fare.

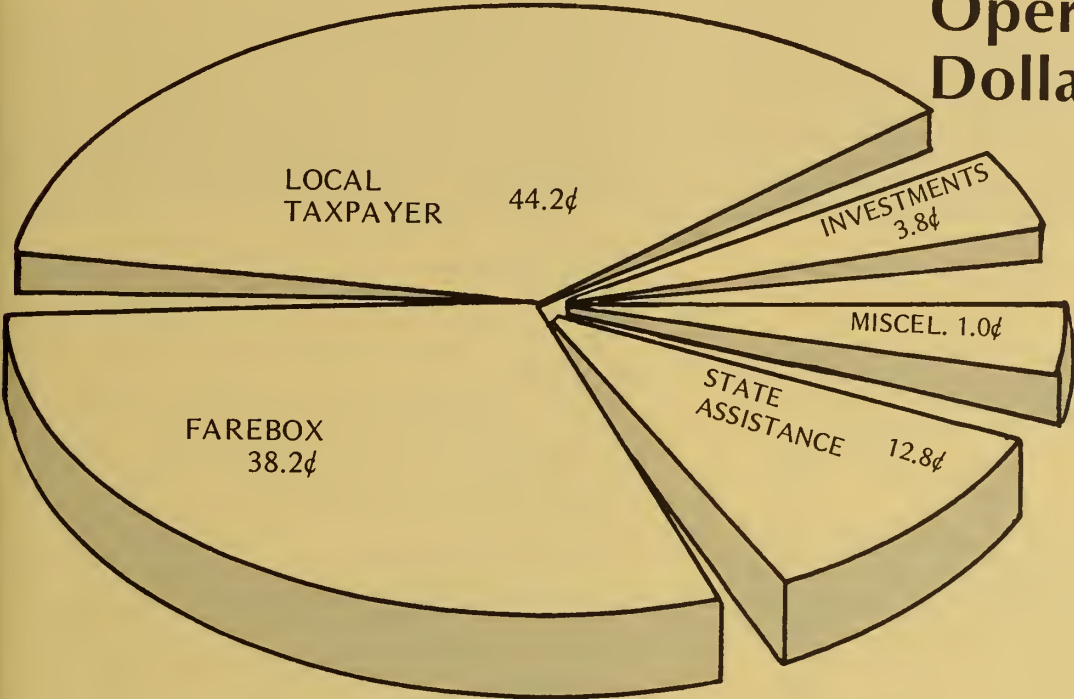
On December 1, 1971, the statutory filing date for bills to be considered by the 1972 session, the Authority filed three proposals that would authorize leasing of air rights over transportation facilities; making entry on private land for the purpose of making surveys, soundings and drillings; and disposing of or selling surplus substations.

A fourth bill, filed by the Authority, would authorize the Commonwealth to take by eminent domain certain railroad properties.

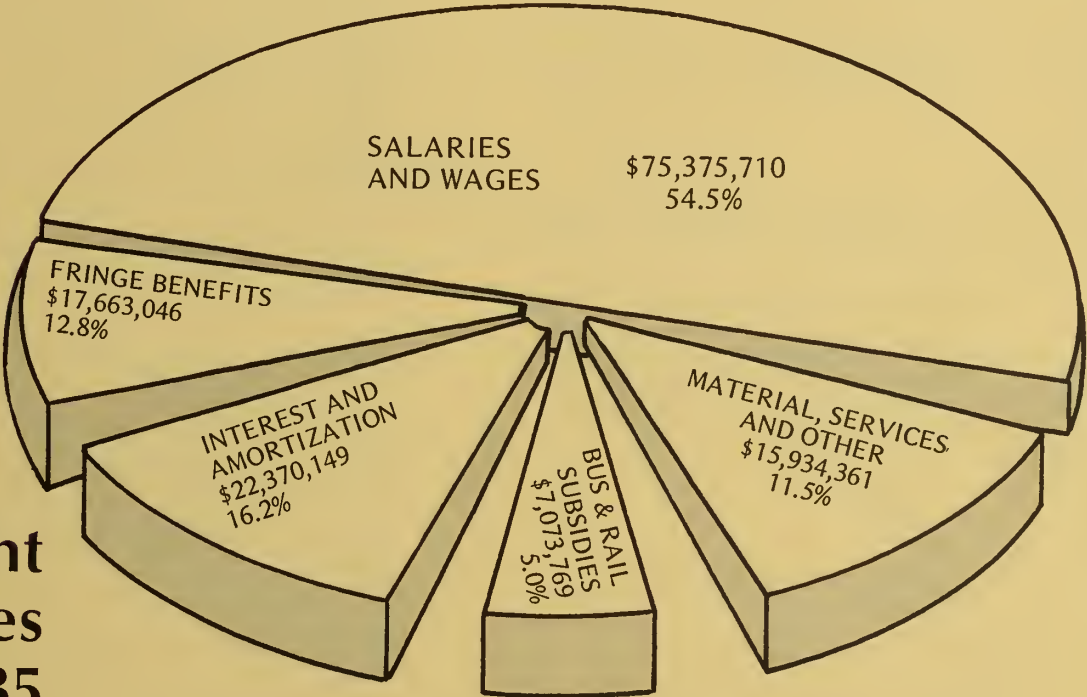


Governor Francis W. Sargent signs into law the \$124 million additional bonding authorization for the MBTA as state, MBTA and union officials look on.

Source of Operating Fund Dollar



Year Ending December 31, 1971



Current Expenses
38,421,035

Balance Sheet

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

December 31, 1990

ASSETS

TRANSPORTATION PROPERTY, at cost:			
Transportation property in service	\$294,176,537		
Construction in progress (Note 10)	<u>95,936,749</u>		
	\$390,113,286		
Less — Reserve for depreciation (Note 7)	<u>103,675,735</u>		\$286,437,551
SPECIAL FUNDS — Cash, Certificates of Deposit and U.S. Government Securities, at cost:			
Construction funds, held by the bond fiscal agent	\$ 40,313,006		
Funds received for relocation of facilities (Note 3)	<u>416,512</u>		
Federal grants and other special funds (Note 8)	<u>384,871</u>		\$ 41,114,389
CURRENT ASSETS:			
Cash	\$ 12,713,322		
Certificate of Deposit	<u>62,836,847</u>		
Accounts receivable —			
Commonwealth of Massachusetts	8,966,184		
Boston Redevelopment Authority (Note 8)	<u>4,867,329</u>		
Other	<u>1,828,157</u>		
Materials and supplies, at average cost	3,514,109		
Prepaid expenses	<u>493,844</u>		\$ 95,219,792
DEFERRED CHARGES:			
Unamortized expansion and modernization costs (Note 1)	\$ 9,106,952		
Other	<u>875,052</u>		9,982,004
			<u>\$432,753,736</u>
			=====

LIABILITIES

LONG-TERM DEBT, exclusive of current maturities, see accompanying statement (Note 9)			\$274,383,854
UNREIMBURSED COST OF SERVICE (Note 7)			(8,708,815)
CURRENT LIABILITIES:			
Current maturities of long-term debt	\$ 8,553,259		
Notes payable	<u>73,000,000</u>		
Accounts payable	<u>8,560,651</u>		
Accrued liabilities —			
Payroll	1,583,191		
Interest	<u>3,136,586</u>		
Other	<u>2,541,485</u>		97,375,172
COMMITMENTS AND CONTINGENCIES (Notes 4, 5, 6 and 10)			
DEFERRED CREDITS (Note 3)			6,706,705
GRANTS — UNAMORTIZED PORTION (Note 8):			
Federal grants	\$55,425,620		
Boston Redevelopment Authority	<u>7,571,200</u>		62,996,820
			<u>\$432,753,736</u>
			=====

The accompanying notes are an integral part of these financial statements.

STATEMENT OF REVENUE AND COST OF SERVICE
FOR THE YEAR ENDED DECEMBER 31, 1971

OPERATING REVENUE:	
Transportation	\$ 53,194,389
Other	1,139,417
	<u>\$ 54,333,806</u>
OPERATING EXPENSES (Note 11):	
Transportation service	\$ 53,469,478
Maintenance	25,986,024
Electric power	6,260,028
Depreciation (Note 7)	8,376,178
General and administrative expenses —	
Salaries and wages	6,561,604
Employee pension and insurance	
benefits (Note 4)	14,114,033
Injuries and damages and workmen's	
compensation claims (Notes 5 & 6)	2,998,862
Other	<u>1,690,061</u>
	\$119,456,268
Operating loss	<u>\$(65,122,462)</u>
OTHER INCOME, including interest	
of \$4,964,929	5,152,722
INTEREST EXPENSE, including	
\$11,705,338 on long-term debt	(13,559,289)
RAILROAD COMMUTER SUBSIDIES,	
including amortization of the original	
Railroad Contract Assistance Program	
of \$325,000 (Notes 1 and 2)	<u>(901,438)</u>
Cost of service in excess of revenue	<u>\$ (74,430,467)</u>

STATEMENT OF UNREIMBURSED COST OF SERVICE
FOR THE YEAR ENDED DECEMBER 31, 1971

BALANCE DECEMBER 31, 1970	\$ 9,641,163
AD — Cost of service in excess of revenue	
for the year ended December 31, 1971 ..	74,430,467
DEDUCT:	
Cost of service reimbursed by the Common-	
wealth of Massachusetts to be assessed to the	
cities and towns constituting the Authority (61,529,259)	
Contract Assistance, portion of the cost of	
service paid by the Commonwealth of	
Massachusetts in accordance with a contract	
for financial assistance between the Authority	
and the Commonwealth, pursuant to Chapter	
563 of the Acts of 1964 and Chapter 147 of	
the Acts of 1968	(12,361,348)
Cost of service reimbursed by the cities	
and towns outside the Authority's area	(256,909)
State diesel and gasoline fuel taxes re-	
imbursable to the Authority in accord-	
ance with Section 2 of Chapter 563	
of the Acts of 1964	(351,176)
Amortization of Federal grants (Note 8)	(864,123)
BALANCE DECEMBER 31, 1971 (Note 7)	<u>\$ 8,708,815</u>

STATEMENT OF CHANGES IN FINANCIAL POSITION
FOR THE YEAR ENDED DECEMBER 31, 1971

FUNDS WERE USED FOR:	
Cost of service in excess of revenue	\$ 74,430,467
Less — Charges to cost of service in excess of	
revenue which did not require funds —	
Depreciation of transportation property (Note 7)	(8,376,178)
Amortization of deferred charges (Note 1)	<u>(340,284)</u>
	\$ 65,714,005
Additions to transportation property, net	26,474,856
Decrease in long-term debt (Notes 9 and 10)	8,553,260
Increase in deferred charges	364,247
Reduction in deferred credits	<u>261,006</u>
Total funds used	<u>\$101,367,374</u>

FUNDS WERE PROVIDED BY:	
Net cost of service reimbursable by the Common-	
wealth of Massachusetts for the 1971 deficit	
to be assessed to the cities and towns consti-	
tuting the Authority (Note 7)	\$ 61,529,259
Contract assistance on debt service (Note 10)	12,361,348
Reimbursement by the Commonwealth of	
Massachusetts of state diesel gasoline fuel taxes	351,176
Reimbursement by cities and towns outside the	
Authority's area for service provided	256,909
Grants from Federal and other sources (Note 8)	13,546,266
Reduction in special funds, net	<u>14,031,831</u>
Total funds provided	<u>\$102,076,789</u>

RESULTING IN A WORKING CAPITAL	
INCREASE OF	\$ 709,415
	=====

CHANGES IN WORKING CAPITAL CONSIST OF:	
Increase (decrease) in current assets —	
Cash	\$ 9,989,858
Certificates of deposit and U.S. Government	
securities	(2,262,030)
Accounts receivable	3,535,519
Materials and supplies	499,636
Prepaid expenses	<u>278,803</u>
	\$ 12,041,786
Increase (decrease) in current liabilities —	
Current maturities of long-term debt	\$ (223,000)
Notes payable	13,000,000
Accounts payable	(2,020,417)
Accrued liabilities	<u>575,788</u>
	\$ 11,332,371
Increase in working capital	<u>\$ 709,415</u>
	=====

The accompanying notes are an integral part of these financial statements.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

STATEMENT OF LONG-TERM DEBT (Note 9) DECEMBER 31, 1971

Massachusetts Bay Transportation Authority General Transportation System Bonds issued under General Laws, Chapter 161A, Section 23 of the Commonwealth of Massachusetts, 1967 Series A, dated March 1, 1967, and 1970 Series A, dated September 1, 1970, both payable in annual installments on March 1 — interest is payable semiannually on March 1 and September 1.

1967 Series A Bonds — The proceeds of the sale of the 1967 Series A Bonds were required to be used for payment of \$40,000,000 of Bond Anticipation Notes outstanding and the balance of \$70,000,000 were required to be deposited in the Bond Proceeds accounts. These bonds were issued to provide funds for the purposes outlined below. The debt outstanding at December 31, 1971, is as follows:

Purpose	First Principal Payment	Year of Maturity	Approximate Annual Payment	Average Interest Rate	
Express service transportation facilities	1969	2007	\$1,900,000	3.78%	\$ 68,350,000
Agreement with railroads	1968	1982	325,000	3.75	3,700,000
Buses and other purposes	1968	1979	300,000	3.75	2,600,000
Local service transportation facilities	1969	2007	50,000	3.78	1,800,000
Capital cost of certain transportation facilities including yards, shops and rolling stock	1969	2007	625,000	3.78	23,325,000
					<u>\$ 99,775,000</u>

1970 Series A Bonds — The proceeds of the sale of the 1970 Series A Bonds were required to be used for payment of \$5,365,000 of Bond Anticipation Notes outstanding and the balance of \$61,500,000 were required to be deposited in the Bond Proceeds accounts. These bonds were issued to provide funds for the purposes outlined below. The debt outstanding at December 31, 1971, is as follows:

Purpose	First Principal Payment	Year of Maturity	Approximate Annual Payment	Average Interest Rate	
Express service transportation facilities	1971	2010	\$1,540,000	6.32%	\$59,960,000
Buses and other purposes	1971	1982	295,000	6.14	3,205,000
Purchase and improvement of the Cambridge subway	1971	1980	190,000	6.18	1,675,000
					<u>\$64,840,000</u>

Metropolitan Transit Authority Bond, payable in semiannual installments of \$500,000 to December, 2020 — Interest payable is the interest payable by the Boston Metropolitan District on their contra debt and refunding issues, which for the year ended December 31, 1971, was 3.09%

\$48,918,372

Rapid Transit Bond, payable in annual installments of \$536,259 to November, 2024 — interest is the actual interest on the City of Boston Transit Debt and refunding issues less income collected on the City's transit debt sinking funds, which for the year ended December 31, 1971, was 3.68%

\$28,421,741

Equipment Serial Bonds:

Year of Maturity	Approximate Annual Payment	Interest Rate		
1973	\$ 45,000	2.50%	\$ 90,000	
	90,000	3.50	180,000	\$ 270,000
1974	8,000	3.00		20,000
1975	122,000	3.00		476,000
1977	218,000	3.00		1,314,000
1978	206,000	3.00		1,230,000
1981	127,000	1.50		1,270,000
1987	127,000	2.90		2,040,000
1988	131,000	2.90		2,227,000
1993	169,000	3.00	\$3,718,000	
	100,000	3.20	2,200,000	5,918,000
	<u>\$1,343,000</u>			<u>\$14,765,000</u>
	=====			=====

Construction Bonds:

2.00%, payable \$102,000 per annum to November 21, 1979, and \$4,590,000 on November 25, 1979	\$ 5,406,000
1.50%, payable \$84,333 per annum to March 1, 1981, and \$3,781,667 on March 1, 1981	4,625,000
2.10%, payable \$22,000 per annum to January 15, 1982, and \$90,000 on January 15, 1982	1,232,000
2.75%, payable \$47,000 per annum to March 1, 1983, and \$2,115,000 on March 1, 1983	2,679,000
2.30%, payable \$10,000 per annum to March 1, 1984, and \$450,000 on March 1, 1984	580,000
3.00%, payable \$55,000 per annum to July 1, 1988, and \$2,475,000 on July 1, 1988	3,410,000
3.60%, payable \$69,667 per annum to February 1, 1989, and \$3,135,000 on February 1, 1989	4,389,000
3.50%, payable \$19,000 per annum to September 15, 1990, and \$855,000 on September 15, 1990	1,216,000
3.20%, payable \$40,000 per annum to April 15, 1993, and \$1,800,000 on April 15, 1993	2,680,000
	<u>\$ 26,217,000</u>

Less — Current maturities of long-term debt

\$282,937,113

Long-term debt

8,553,259

\$274,383,854

=====

The accompanying notes are an integral part of these financial statements.

Notes to Financial Statements

December 31, 1971

(1) UNAMORTIZED EXPANSION AND MODERNIZATION COSTS

The Authority has deferred certain costs related to the expansion and modernization of the transportation system. Included is the Authority's share of costs under the original Railroad Contract Assistance Program which provided subsidies to certain railroads which have temporarily discontinued passenger service until such time as permanent alternative facilities are constructed by the Authority. These costs, which totaled \$5,000,000, are being amortized by charges to the cost of service over fifteen years. Amortization in 1971 amounted to \$325,000 and the unamortized balance at December 31, 1971, was \$3,700,000. In addition, in connection with the Authority's acquisition of the Eastern Mass. Street Railway Company in 1968, costs of \$611,362 were not assigned to tangible assets. These costs are being amortized by charges to cost of service over forty years. Amortization in 1971 amounted to \$15,284 and the unamortized balance at December 31, 1971, was \$565,510.

The other deferred expenses relating to the expansion and modernization of the transportation system will be amortized by charges to the cost of service, commencing in 1972.

(2) RAILROAD COMMUTER SUBSIDIES

Under Chapter 24 of the Acts of 1967 and Chapter 728 of the Acts of 1968, as amended, the Authority and the Commonwealth of Massachusetts entered into agreements whereby the Commonwealth will subsidize, up to certain specified limits, 90% of the cost of financing agreements with the railroads to provide service to and from Boston until July 31, 1972. In accordance with these agreements, financial assistance received by the Boston & Maine and Penn Central Railroads and related expenses thereto amounted to \$5,760,756 during the year ending December 31, 1971; \$5,184,318 paid by the Commonwealth and \$576,438 paid by the Authority.

(3) RELOCATION OF FACILITIES

In April, 1967, the Authority entered into an agreement with the John Fitzgerald Kennedy Library Incorporated, whereby the Authority would relocate certain transportation facilities in order to convey certain properties to the United States and the Library Corporation.

The Commonwealth of Massachusetts appropriated \$6,098,400 to the Authority for the part of the properties conveyed to the United States. In addition, the Authority received \$1,330,112 from the Library Corporation for the remaining part of the properties, totaling \$7,428,512.

These facilities, having a net book value of \$709,807, have been retired. The amount received in excess of net book

value (\$6,718,705), less \$12,000 of expenses incurred in connection with the acquisition of replacement property, is reflected as a deferred credit. When the replacement facilities have been constructed, this credit will be amortized over their estimated useful lives as an offset to the applicable depreciation expense.

In December, 1969, the Authority purchased for \$7,000,000 a parcel of property to be used to replace the facilities conveyed in 1967.

(4) PENSION

The Authority has agreed to provide retirement benefits to employees through a contributory pension plan which as currently amended requires the payment by the Authority of an amount equal to 11-5/8% of the total payroll of employees who are members of the plan. Based on recent actuarial valuations, this level of contribution, together with members' contributions, is intended to provide for current service costs and to provide for past service costs over the remaining period of employment of the members. The total pension cost to the Authority for the year ended December 31, 1971, was approximately \$9,230,000. The Authority funds its pension cost currently. The most recent actuarial valuation was made as of December 31, 1970, and at that time unfunded costs approximated \$96,000,000. The actuarially computed value of the vested benefits of the plan as of December 31, 1970, exceeded the pension fund assets by approximately \$38,000,000.

(5) INJURIES AND DAMAGES

The Authority is a self-insurer on claims for injuries and damages to the extent of \$100,000 per accident. Insurance coverage is carried on claims in excess of that amount up to a maximum limit of \$15,100,000 per accident. The Authority accounts for injuries and damages by charges to operating expenses as payments are made.

(6) WORKMEN'S COMPENSATION INSURANCE

Effective May 1, 1965, the Authority became a self-insurer on workmen's compensation claims under the workmen's compensation laws of the Commonwealth of Massachusetts to the extent of \$50,000 per occurrence. Insurance coverage is carried on each occurrence in excess of that amount up to a maximum limit of \$2,050,000 per occurrence. The Authority accounts for these claims by charges to operating expenses as payments are made.

Prior to May 1, 1965, the Authority was insured for workmen's compensation claims by an affiliate, The Transit Mutual Insurance Company. Transit Mutual's reserve for workmen's compensation claims as of May 1, 1965, has been carried over in the accounts of the Authority. The Authority charges payment of claims incurred prior to May 1, 1965, to this reserve.

Notes to Financial Statement (Continued)

(7) UNREIMBURSED COST OF SERVICE

The legislative act under which the Massachusetts Bay Transportation Authority was established provides, among other things, that the Commonwealth of Massachusetts shall reimburse the Authority for the net cost of service. The amounts reimbursed are then assessed to the 79 cities and towns constituting the Authority. The "net cost of service", as defined, includes a charge equal to the payments made on long-term debt during the period, and does not include a charge for depreciation. For financial reporting purposes however, the Authority follows the generally accepted method of depreciating the cost of property over its estimated useful life.

The cumulative excess of depreciation charges over payments made on long-term debt is charged to the unreimbursed cost of service account and is recovered in years when payments made on long-term debt exceed depreciation. During the year ended December 31, 1971, payments on long-term debt exceeded depreciation charges by \$68,225. This excess is primarily due to the fact that payments are being made on certain long-term debt, the proceeds of which have been expended on construction which is still in progress and is not yet being depreciated.

(8) GRANTS

Under the Urban Mass Transportation Act of 1964, the Department of Transportation has approved for the Authority grants aggregating \$144,500,000. The Authority has received \$57,662,034 of this amount. These funds have been used by the Authority to purchase new buses and to modernize and expand mass transportation facilities.

Under an agreement between the Boston Redevelopment Authority and the Massachusetts Bay Transportation Authority, the BRA has approved grants aggregating \$12,000,000 in connection with the expansion of mass transportation facilities. The Massachusetts Bay Transportation Authority has incurred costs totaling \$7,571,200 related to this agreement. Of this amount they have not yet been reimbursed by the BRA for \$3,688,477 which is included in accounts receivable. Although substantially all of this amount and other amounts receivable from the BRA are past due, in the opinion of management, the receivable is collectible.

The grants are carried as a deferred credit and when the related facilities are put into service the credit is amortized over the estimated useful life of the asset. In the current year, \$864,123 of amortization has been credited to the unreimbursed cost of service.

(9) LONG TERM DEBT

The legislative act under which the Massachusetts Bay Transportation Authority was established provides, among other things, if at any time any principal or interest is due on any bond or note issued or assumed by the Authority and funds to pay the same are not available, the Commonwealth of Massachusetts shall thereupon pay over

to the Authority the amount required to meet such obligations.

(10) CONSTRUCTION PROGRAM

The Authority's program for mass transportation within the area constituting the Authority involves a total estimated cost of \$765,000,000. Financing requirements for the program are expected to be met through various sources, including the issuance by the Authority of \$349,000,000 of long-term debt securities. The legislative act authorizing the issuance of debt securities was amended during 1971 and currently provides for participation by the Commonwealth of Massachusetts in payment of annual debt service costs on bonds issued by the Authority as follows: on the \$175,000,000 of bonds issued prior to January 1, 1971, the debt service on \$144,800,000 is eligible for contract assistance at either 90% or 50% as provided by contract; the annual debt service on bonds issued after January 1, 1971, is eligible for contract assistance at 90%. However, regardless of when issued, contract assistance on debt service will not be extended to over \$257,000,000 of bonds issued at any time. The remaining financing requirements are expected to be met through Federal transit aid, Federal urban renewal funds and relocation cost reimbursement.

Expenditures on the program through December 31, 1971, have been financed through the issuance of \$175,000,000 of Massachusetts Bay Transportation Authority General Transportation Systems Bonds, and other sources as mentioned above.

As of December 31, 1971, the Authority has entered into purchase commitments amounting to approximately \$22,000,000.

(11) SUPPLEMENTARY OPERATING EXPENSE INFORMATION

Operating expenses captioned below consist of the following:

Transportation services —	
Salaries	\$47,327,571
Taxes, including payroll taxes	2,260,177
Fuel	876,387
Other	3,005,343
	<u>\$53,469,478</u>
	=====
Maintenance —	
Salaries and wages	\$19,065,142
Materials and supplies	6,266,792
Taxes, including payroll taxes	654,090
	<u>\$25,986,024</u>
	=====
Electric power —	
Salaries and wages	\$ 2,425,393
Power purchased	808,947
Fuel	2,670,800
Taxes, including payroll taxes	83,389
Other	271,499
	<u>\$ 6,260,028</u>
	=====



Serving the
Transportation Needs
of the
Greater Boston Area





